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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,556	05/16/2001	Timothy Warner	01101	1507

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DENNISON, SCHULTZ & DOUGHERTY
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER

COMBS, JANEL A

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 02/12/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,556

Applicant(s)

WARNER, TIMOTHY

Examiner

Janelle Combs-Morillo

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasato et al (US 5,865,912 A).

Miyasato teaches rolled, forged, or extruded (column 18 line 60, column 3 lines 7-12) aluminum alloy product typically 0.35-2.1 inches thick (9-53 mm, column 6 lines 23-26), with a composition consisting of (in weight%): 5.2-6.8% Zn, 1.7-2.4% Cu, 1.6-2% Mg, 0.03-0.3%Zr, balance aluminum (abstract). Miyasato teaches a conventional T6 temper can be applied- which includes solution heat treating, quenching, and artificially aging (column 20 lines 47-50), substantially as presently claimed. Miyasato teaches that said product is preferably 85-100% unrecrystallized (column 16 lines 43-46), and therefore Miyasato is held to meet the presently claimed limitations of "partly recrystallized" as well as <35 vol% recrystallized grains in between one-quarter and mid-thickness. Miyasato does not specify the intercept distance between recrystallized areas.

However, as stated above, Miyasato teaches a partly recrystallized AlZnMgCu alloy product that is processed in substantially the same way as the presently claimed product. The examiner points out that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical

processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims (such as distance between recrystallized areas) are necessarily present. See MPEP 2112.01.

Because Miyasato teaches a partly recrystallized aluminum alloy product with substantially the same composition and processed substantially as presently claimed, it is held that Miyasato has created a prima facie case of obviousness of the presently claimed invention.

Concerning dependent claims 2 and 3, as stated above, because the prior art teaches substantially the same product processed substantially as presently disclosed/ claimed, then the properties applicant discloses and/or claims (such as distance between recrystallized areas) is expected to be present. See MPEP 2112.01.

Concerning dependent claims 4 and 5, Miyasato teaches an overlapping alloy composition (as stated above).

Concerning dependent claim 15, Miyasato teaches that said product can be used for a structural member of an aircraft (column 19 lines 53-54).

3. Claims 1-5, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahani et al (US 6,027,582).

Shahani teaches a rolled, extruded or forged AlZnMgCu alloy >60 mm thick with the following composition (in weight%): 5.7-8.7% Zn, 1.7-2.5% Mg, 1.2-2.2% Cu, <0.14% Fe, <0.11% Si, 0.05-0.15% Zr, <0.02% Mn, <0.02% Cr (column 3 lines 38-52), optionally Ti (column 1 line 60). Shahani teaches the application of a T6 temper (column 16 line 5), which includes solution heating, quenching, artificially aging. Shahani teaches that the fraction of the

recrystallized grains between the quarter thickness and half thickness $\leq 35\%$ (column 4 lines 1-4). Shahani does not specify the intercept distance between recrystallized areas.

However, as stated above, Shahani teaches a partly recrystallized AlZnMgCu alloy product that is processed in substantially the same way as the presently claimed product. The examiner asserts that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims (such as distance between recrystallized areas) are necessarily present. See MPEP 2112.01.

Because Shahani teaches a partly recrystallized aluminum alloy product with substantially the same composition and processed substantially as presently claimed, it is held that Miyasato has created a prima facie case of obviousness of the presently claimed invention.

Concerning dependent claims 2 and 3, as stated above, because the prior art teaches substantially the same product processed substantially as presently disclosed/ claimed, then the properties applicant discloses and/or claims (such as distance between recrystallized areas) is expected to be present. See MPEP 2112.01.

Concerning dependent claims 4, 5, and 7 Shahani teaches an overlapping alloy composition (as stated above).

Concerning dependent claim 15, Shahani teaches that said product can be used for a structural member of an aircraft (abstract).

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahani et al (US 6,027,582), "ASM Handbook: Volume 9 Metallography and Microstructures" in view of Shahani et al., or Miyasato et al (US 5,865,912 A) alone, or in view of JP 2000-054051 (JP'051).

The prior art of Shahani, "ASM Handbook: Volume 9", or Miyasato does not teach the presently claimed range of Ti and B.

However, the presently claimed ranges of Ti and B are within the (inevitable) impurity limits allowed by the prior art of record (see above for specific compositions taught by the prior art of record). Therefore, it is held that Shahani, "ASM Handbook: Volume 9" in view of Shahani et al, or Miyasato have created a prima facie case of obviousness of the presently claimed invention.

Alternatively, the examiner points out that small amounts of Ti and B are beneficial to age hardenable aluminum alloys because the addition of Ti and B helps prevent cracking when ingots or billets are cast (see JP'051 [0012], etc.). It would have been obvious to one of ordinary skill in the art to add very small amounts of Ti and B, to the unrecrystallized Al alloys taught by Shahani, "ASM Handbook: Volume 9", or Miyasato, because JP'051 teaches that said addition of Ti and B helps prevent cracking when ingots or billets are cast.

Response to Arguments/Amendments

5. In the response filed on December 2, 2002, applicant amended claims 1, 5, and 15.

Applicant's argument that the present invention is allowable over the prior art of record because the prior art does not teach a partly recrystallized structure (arguments page 3) has not been found persuasive. As acknowledged by applicant, the term "unrecrystallized" is defined by

Miyasato to mean preferably 85 to 100% unrecrystallized, and therefore overlaps the range of “partly recrystallized”.

Applicant’s argument that the present invention is allowable over the prior art of record because the prior art does not specify that the intercept distance between recrystallized areas is greater than 250 μm (arguments page 4-5), has not been found persuasive. As stated above, the prior art teaches a partly recrystallized AlZnMgCu alloy product that is processed in substantially the same way as the presently claimed product, and therefore substantially the same distance between recrystallized areas is expected to occur.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1742

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs- Morillo whose telephone number is (703) 308-4757. The examiner can normally be reached Monday through Friday from 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (703) 308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER

jcm



January 30, 2003